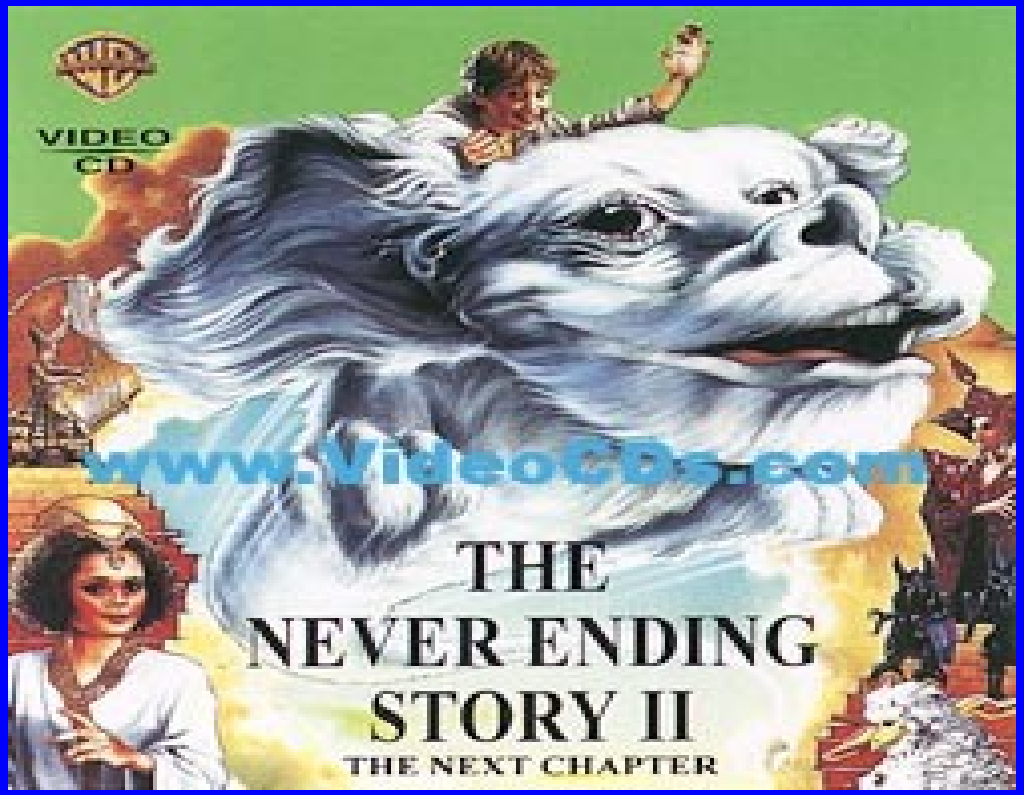
Accessing Best Evidence

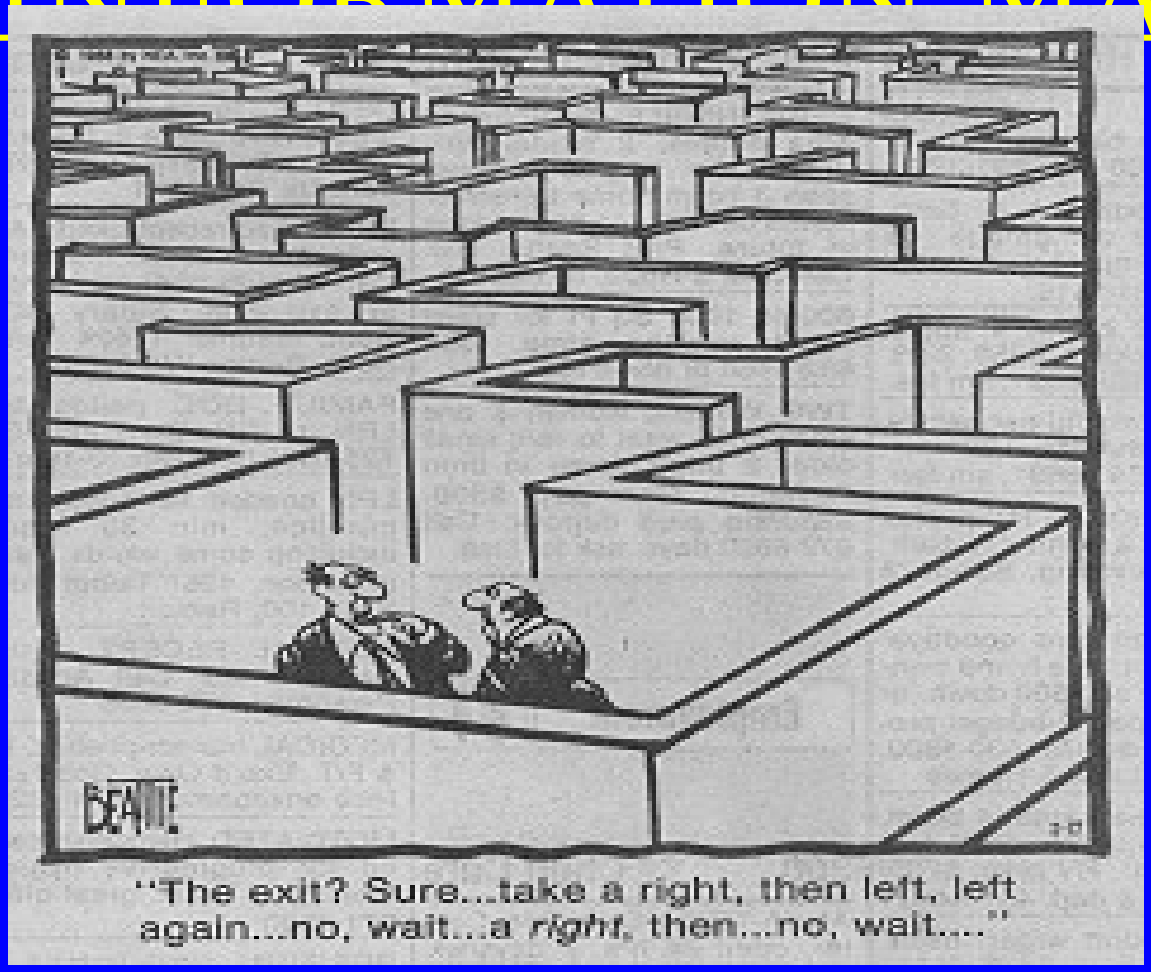


evidence based health care seminar

camp pendleton, ca may 3-5, 2000

kenneth a conrad, md

OR…Finding you way through the INFORMATION MAZE



Problem

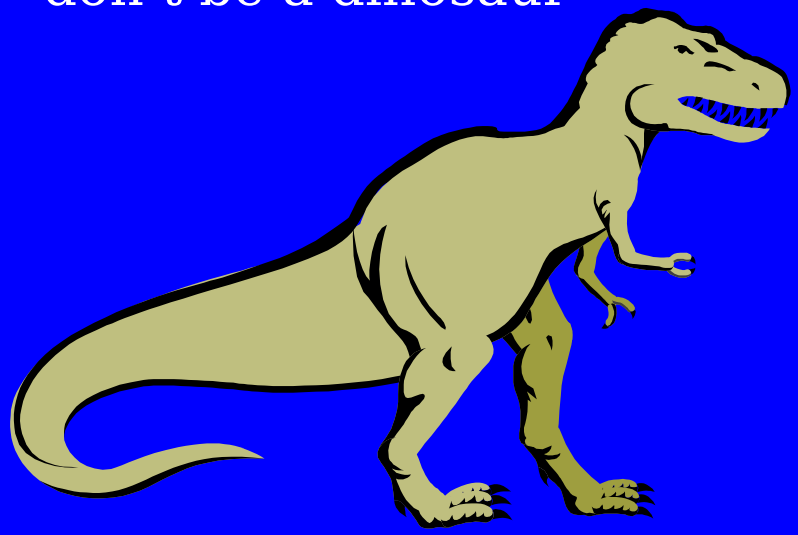
- Multiple questions during clinic and rounds that are unanswered.
- You read or heard it “somewhere” but can’t quite remember specifics.

Goals and Objectives

- Understand how to maximize USEFULNESS of medical information sources for hunting and foraging.
  - Brief overview of the internet
- Familiarity with and reasons for using:
  - Internet accessed texts and data bases.
  - General and Medical specific search engines
  - Web Search Entry Portals including OVID, PUBMED, CeReS, Sumsearch.

Why Access Best Evidence?

- Year of training determines care
- Time lag for best practice
  - » don’t be a dinosaur



Why Access Best Evidence: Information Anxiety

- Most clinicians suffer from ***too much*** information
- High potential for “ping-pong” between different sources

The Usefulness Equation

Usefulness = Validity X
Relevance

of any source ***work***

Work

- Basic law of human behavior: lowest amount of work you can get away with
- Varies with source and your need
- Lowest work with high validity and relevance = efficiency

The Usefulness Equation

Usefulness = Validity X
Relevance

of any source ***WORK***

WORK: The How, Where, and Why

- Why: Reason for information
- Where: Source of information
- How: Use of technology (or not)

The Why: Reasons for information

- Basic Knowledge
  - "background information"
  - generally medical school, residency
  - (But who can remember all that stuff?!*!)
- Keeping up
- Just in Time

The Why

- **Hunting :**To answer a specific question
- **Foraging :**To keep up with new developments

The Where

- Original Research
- Academic Reviews
- Decision/Cost Analysis
- Practice Guidelines
- Translation Journals
- Continuing Medical Education
- Clinical Experience
- Experts
- Newsletters and Survey Services
- Pharmaceutical Representatives
- Audiotapes
- Patients/Qualitative Research

The HOW-Foraging strategies

- The “cookie” method
- Hanging out in the doctor’s lounge
- The Hawaiian method.
- Post office (monographs, journals, audiotapes)
  - PC based vs paper
- Internet (Medscape, Cyberounds)
- Specialty based CME (eg home assessment)

Foraging Problems

- Textbooks out of date and expensive
- Hundreds of journals
- Variation in quality of evidence
- Which “expert” or journal is up to date and evidence based?
- Breadth of Primary Care that needs systematic and periodic reviewing

Foraging

- Read multiple journals..concentrate on high relevance and interest (ie AFP, NEJM, JAMA).
- May receive subscriptions via internet

Journal Articles

- Innumerable
- Variable quality
- How high can your bedside stack grow? OR
- How much memory does your computer have?
- Conclusion: Let someone else do the sorting and filing

Foraging

- Internet websites

Medscape® Primary Care

- Daily medical News
- CME
- Conference Highlights (ex: Am Coll Card)
- Search capabilities
- Stock market (huh?)
- BUT…who sponsors these guys?

Foraging for **Best Evidence** at the Post Office (Primary Care)

- Periodicals that filter multiple journals
- Newsletters

ACP Journal Club

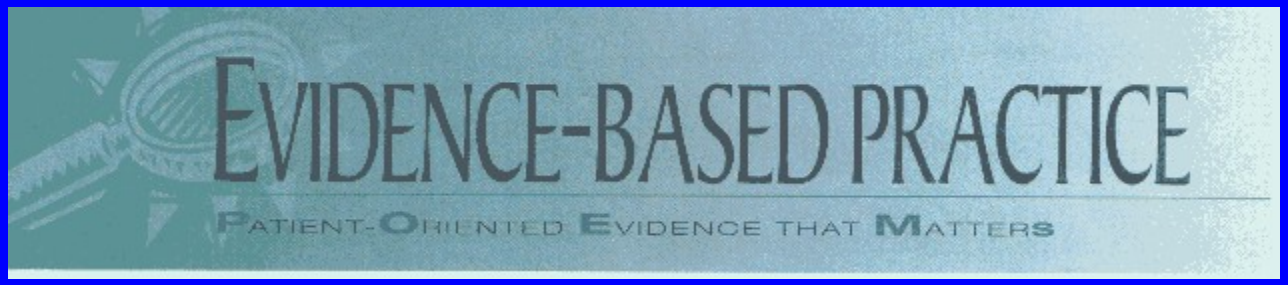
- Abstracts of only useful, valid articles
- full range of topics

ACP Journal Club

- Combined with *Evidence Based Medicine* in January 2000.
- Includes FP,OB/Gyn, Psych, Surgery.
- Includes systematic review articles and commentary on Cochrane.
- ACP-ASIM receive this as a benefit of membership. Included with subscription to Annals.

POEMs in Journal of Family Practice

- Patient-Oriented Evidence that Matters
- Abstracts with commentary
- 8 per month
- JFP free to FPs



Selects from 80 journals

Picks those that should change practice

www.infopoems.com

Web Based Journals

- Bandolier

Bandolier

- Produced monthly in Oxford for the NHS Research Directorate
- bullet points for EBM
- free on internet
- summaries of systematic reviews
- helpful summaries of EBM jargon

Www.jr2.ox.ac.uk/Bandolier/

Hunting

- Answering the question in clinic(or after clinic)
  - the phone
  - the office next door
  - the little black book(peripheral brain)
  - textbooks on the shelf
  - journals at the bedside (?)
  - Internet

Hunting Problems

- Textbooks out of date and expensive
- No organization to thousands of journal articles
- Variation in quality of evidence
- Which “expert” is up to date and evidence based?

Hunting

Traditional

- Phone call to expert
- Office next door
- The little black book
- Text book
- Journal article
- Librarian

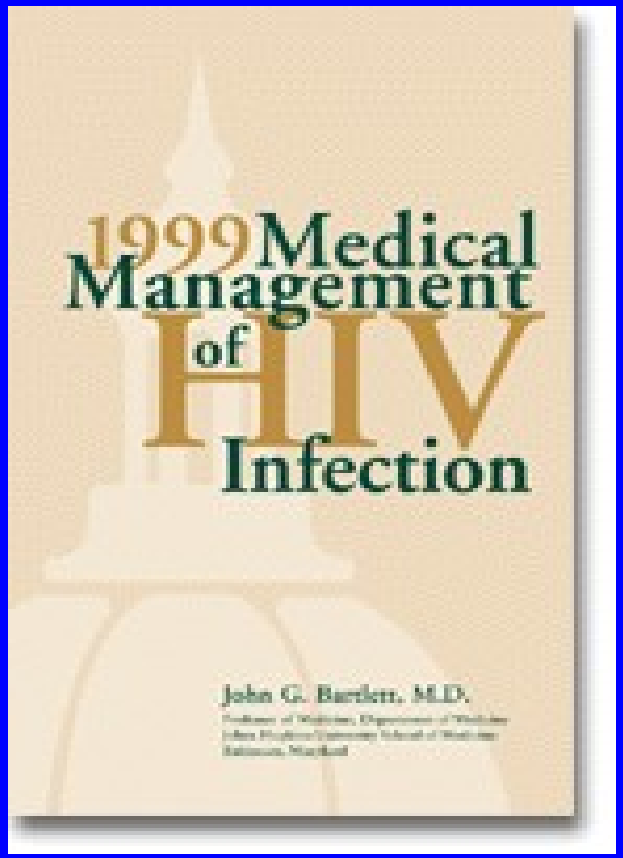
New Technology

- E-mail
- CD-ROM
- personal computer file
- hand-held computers
- PC based:
  - Proprietary internet sites
  - PUBMED, OVID, CeReS
  - world wide web

Textbooks

- Bulky
- Expensive
- Out of date when published for advancing technologies.
- BUT….
  - Contain baseline information
  - Organized

Textbooks on line



Hopkins-aids.edu/publications/book/book_toc

Pamphlets

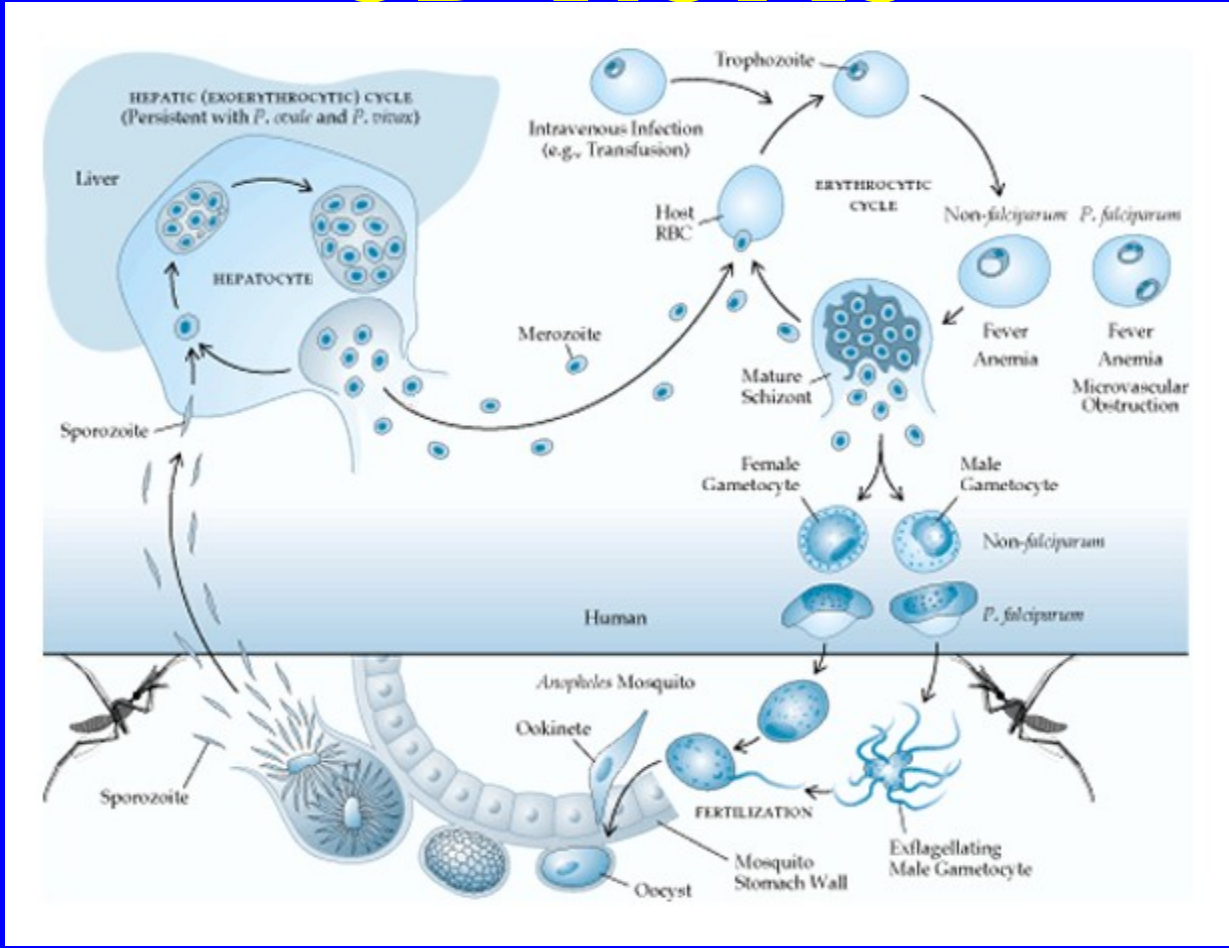
CDC
Centers for Disease Control and Prevention

Cdc.gov/travel/

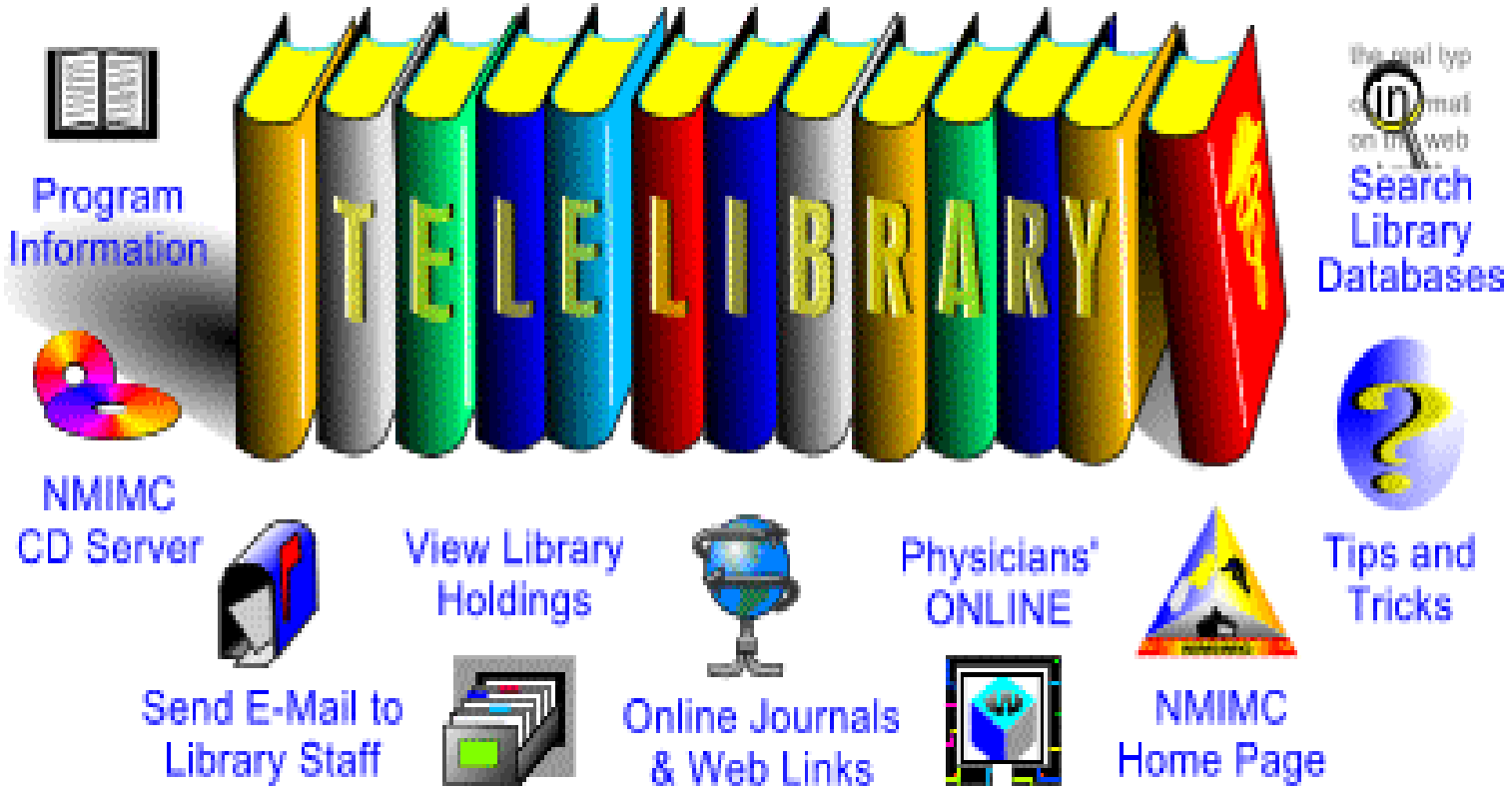
CD-ROMs

- Huge amounts of information
- Can’t change unless you buy a new one

CD-ROMs



Www.samed.com


Program Information
TELELIBRARY
Search Library Databases
NMIMC CD Server
View Library Holdings
Physicians' ONLINE
Tips and Tricks
Send E-Mail to Library Staff
Online Journals & Web Links
NMIMC Home Page

- By subscription
- free via USUHS for alumni or faculty
- 35 textbooks, journal search, practice guidelines, patient ed handouts, drug info

Http://www.mdconsult.com

Hunting: Least Work + Best evidence

- Distilled literature based products
- result from formal searching and appraisal process.
- Sources frequently same as Foraging but need search capabilities.

CD-ROMs

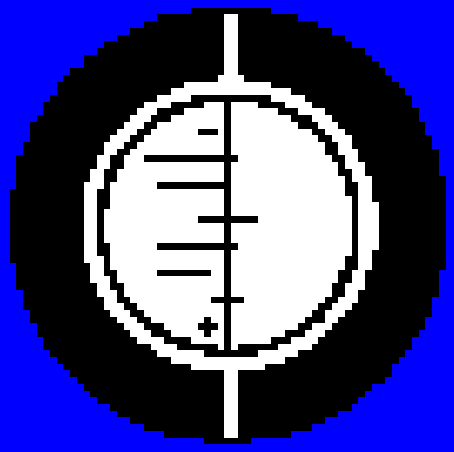
- Huge amounts of information
- Can’t change unless you buy a new one
- Search engines of variable quality
- Best Evidence 4
- Cochrane Collaboration
- InfoRetriever

Best Evidence 4

- Structured abstracts from two sources: ACP Journal Club (91-98) and EBM (95-98) now combined as ACP Journal Club
- >1200 abstracts and commentaries
- full text *Diagnostic Strategies for Common Medical Problems 2nd ed.*
- $110.00 from 1-800-523-1546 ext 2600

Systematic Reviews

- Concise summaries of the best available evidence addressing sharply defined clinical questions, using explicit and rigorous methods to identify, critically appraise, and synthesize relevant studies (Mulrow C, Cook, D *systematic reviews,* ACP, 1998)



The Cochrane Collaboration

Www.cochrane.org

Cochrane Products

- Cochrane Database of systematic Reviews
  - regularly updated reviews of the effects of health care
- Database of Abstracts of Reviews of Effectiveness
  - critical assessments and structured abstracts of good systematic reviews published elsewhere

InfoRetriever

- Basic rx for 1200 drugs
- >600 Cochrane Database abstracts
- 30 Useful clinical prediction rules
- summaries of key evidence-based guidelines
- www.infopoems.com
- for Windows95/98/NT or handheld CE2.11

Using the Internet

lib.berkeley.edu/TeachingLib/Guides/Internet/

The Internet (caveat surfer)

- “Getting information from the internet is like listening to gossip at the mall”

Evidence -based Resources at AHRQ

- Evidence-based Practice Centers
- U.S. Preventive Services Task-Force
- National Guideline Clearinghouse

- www.ahrq.gov

Internet Search Engines

- Internet has grown and is uneven quality
- SPECIALIZED vs GENERAL Search Engines
- may want to start with subject directory or subject guide
- use engines that are large and well organized
- each about 40% unique, 60% overlap

General Search Engines

- Alta Vista **(altavista.com)**
- Hotbot(**hotbot.com)**
- Mamma **(mamma.com)**
- Northern Light **(northernlight.com)**
- Fast Search **(alltheweb.com)**
- Google **(google.com)**
- Infoseek **(infoseek.go.com)**

Meta-search engines

- Searches several engines simultaneously.
- useful if looking for unique phrase.
- BUT…may retrieve only 10% of results in any database queried.
- EX: Dogpile, Infind, Metacrawler, Metafind

Multisubject Health Directories

- Www.about.com/health - links to subjects maintained by subject specialists
- www.healthweb.org- var clinical subjects
- www.medwebplus.com - info on diseases, specialties, instituitions
- www.drkoop.com-soon to be bankrupt

Internet

- Medicine specific search engines
  - quality managed at a resource level rather than by specific pages
- ex: OMNI gateway for UK academics
  - www.omni.ac.uk

Specialized Search Engines: Journal Searching

- MEDLINE
- PUBMED
- OVID
- Sumsearch (http://sumsearch.uthscsa.edu/)
- CeReS (www.ceres.uwcm.ac.uk/)
- Infotrieve

- PUBMED:
  - Clinical queries using Research Methodology Filters
  - Categories: (therapy,diagnosis,etiology,prog)
  - Emphasis: (sensitivity, specificity)
- Direct search of National Library of Medicine collection

-Full text articles

-Features:

combine

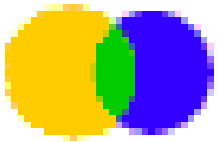
journal specific

-By subscription

Ovid search options

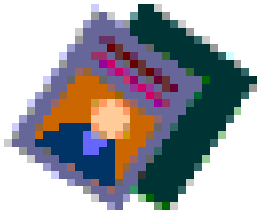
- Full text option
- Best Evidence-EBM Reviews
- Cochrane database
- MEDLINE by date

Search Tools



Combine

Title



Journal

Internet Searching

- Infotrieve: ability to search MEDLINE plus other databases
  - allows natural language questions.
  - Www3.infotrieve.com/

CeReS

CeReS

- Centre for Research Support
- TRIP database
- 26 data bases of hyperlinks from Evidence-based sites around the world
- over 10,000 links

Internet

Specialist Search Engines:
SUMSearch
-formats query
-makes suggestions
-helps with MEDline, MeSH topics

http://sumsearch.uthscsa.edu/

Bottom Lines

- Know why you want information
- Look for systematic reviews first (eg Cochrane, AHRQ < formerly AHCPR>)
- Look to Medical Search engines if systematic review not available (PUBMED,OVID, CeRes, Sumsearch)* **but systematic reviews frequently available within MSE.**
- General Search engines last resort

Evidence-based Practice Centers

- BC/BS
- Duke
- ECRI
- Johns Hopkins
- McMaster
- MetaWorks
- New Engl Med Ctr
- Oregon HSU
- So. Calif - RAND
- RTI - UNC
- UCSF-Stanford
- U.Texas San Antonio

Evidence-based Practice Centers (EPCs)

- Created in 1997; 12 Centers
- Produce evidence reports/technology assessments
- first reports available in 1999, but references not available until 2000.

1997 EPC Topics

- Testosterone suppressant rx
- cervical cytology
- dysphagia in elderly
- atrial fibrillation
- ADHD rx
- Acute sinusitis
- TBI rehabilitation
- Urinary complications in paralysis
- alcoholism pharmacotherapy
- stable angina management
- new drugs for depression

1998 EPC Topics

- Preterm labor management
- Erythropoetin use
- disability in ESRD
- Acne treatment
- Ventilator weaning
- Cancer pain mgmt
- Cataract anesthesia
- Acute otitis media
- Post-traumatic DVT prevention
- Chronic HTN in pregnancy
- Unstable Angina
- Cardiac ischemia eval in the ED

Proprietary internet sites (integrated medical information)

- Telelibrary (imcenter.med.navy.mil/telelibrary/default)
- Mdconsult (mdconsult.com)
- Medscape (medscape.com)